

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES
600 NORTH 5TH STREET
RICHMOND, VIRGINIA 23219**

1-866-493-1087

**SAMPLING PROCEDURE FOR
VOLATILE ORGANIC CHEMICALS
(VOCs)**

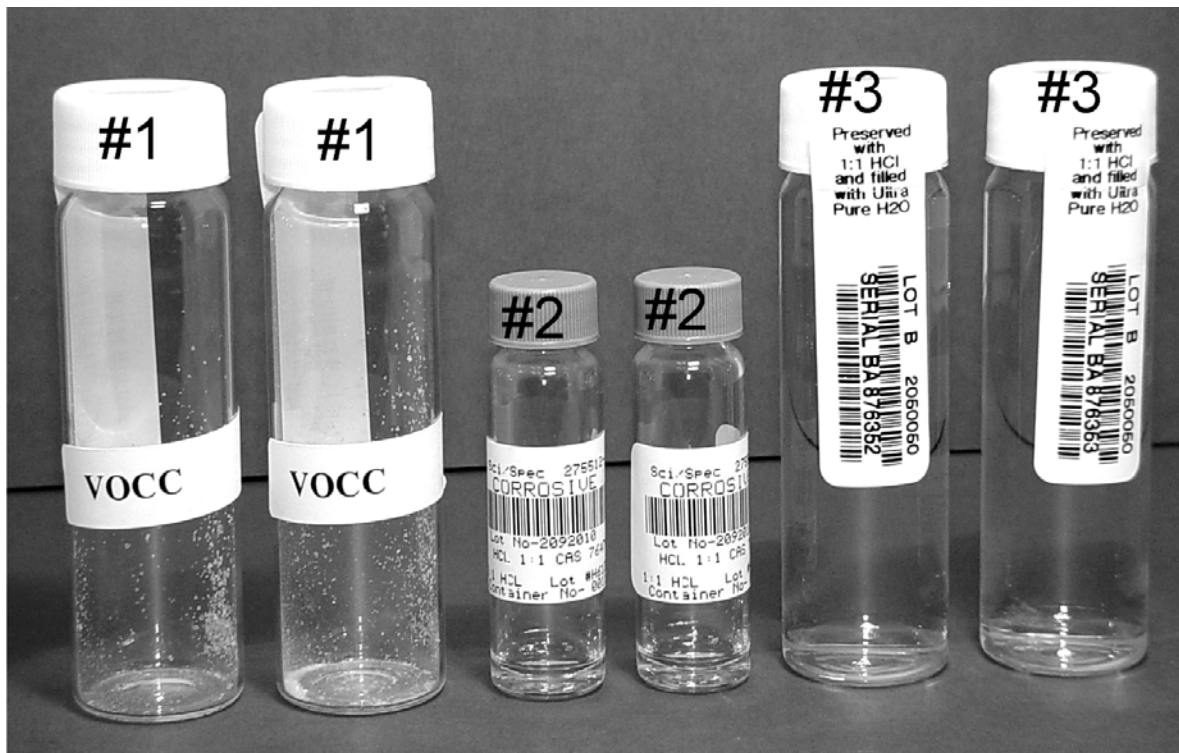
Responding to your request for water analysis, laboratory personnel have prepared and shipped the appropriate sample containers. These vials contain the correct preservatives. **DO NOT RINSE THESE BOTTLES PRIOR TO FILLING WITH SAMPLE.** If more than one source is to be sampled it will be necessary to separate the bottles into sets. Follow the sampling instructions very carefully.

KIT INVENTORY

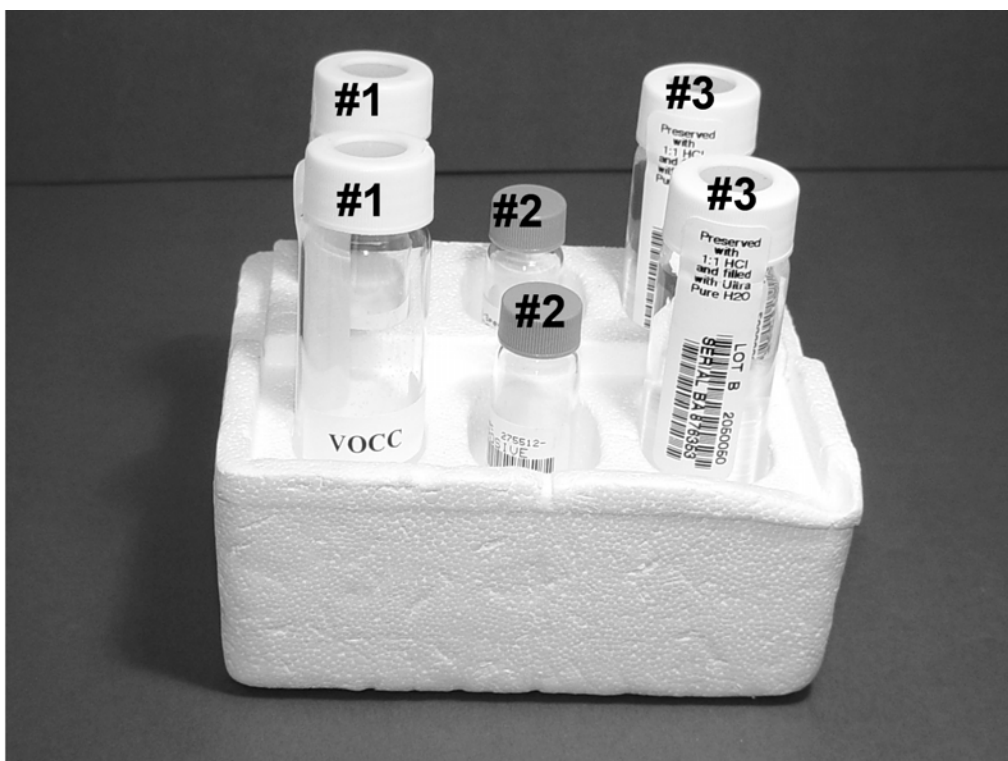
KIT CODE: VOCC

1. 2 - 40-mL glass vials with Teflon-lined septum caps to be filled with sample using instructions provided with kit.
2. 2 - Small glass vials with 0.5 mL 1:1 hydrochloric acid. One vial of acid to be added to each sample vial during sample collection.
3. 2 - 40-mL clear glass vials with Teflon-lined caps filled with pure water and a small amount of hydrochloric acid. **DO NOT** open these vials and return them with the sample vials in your kit. **RETURN THEM WITH THE SAMPLE VIALS IN YOUR KIT.**
4. 1 - Sample form containing two peel-off labels to be placed on your sample vials.
5. 1 - Set of sampling instructions.
6. 1 - 8" X 10" Ziploc bag. (For returning sample form)
7. 1 - 12" X 15" Ziploc bag. (For polyfoam sample shipping container)
8. 1 - Polyfoam vial holder.
9. 1 - Cooler.
10. 1 - Return address label.

SAMPLE KIT



- #1. **Sample Vials** – Fill with sample following the Sampling Procedure.
- #2. **Preservative Vials** containing 0.5 mL dilute hydrochloric acid.
- #3. **Traveling Blank Vials** (Do not open and return with samples).



SAMPLE FORM

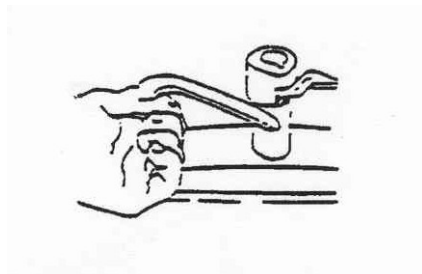
1. Each sample kit comes with a pre-printed sample form.
2. Each sample form contains 2 peel-off labels to be placed on your sample bottles at the time of collection.
3. Before you begin your sample collection, fill out the information requested on this pre-printed form. The 2 pre-printed labels need the date and time of sample collection. When entering the time of collection use Military Time (see example below to see the relationship of Military Time to Civilian Time).

Civilian	Military	Civilian	Military	Civilian	Military
6:00 AM	0600	10:15 AM	1015	1:00 PM	1300
7:30 AM	0730	11:00 AM	1100	3:25 PM	1525
9:00 AM	0900	12:00 Noon	1200	5:00 PM	1700

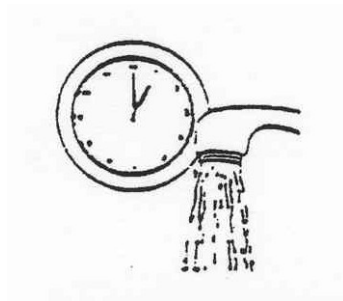
4. Under the labels, fill in the information requested on sample collector and give us a telephone number we can call if there is a problem with the sample shipment.
5. Remove a label from the sample form and place it on your sample container before collecting the sample. The labels stick better on a dry container.
6. Each sample bottle contains an identifying label that will match the sample container labels on the sample form (Ex.: VOCC is on the sample form and the peel-off labels, and also on the sample vials for volatile organics).
7. See the final page of these instructions for an example of the sample form.

SAMPLING PROCEDURE

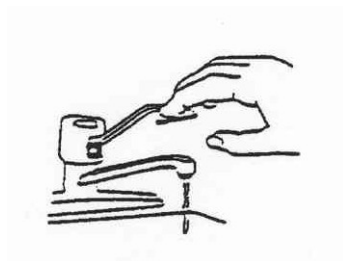
1. VOC samples must be taken at a cold water tap, with all screens, filters, aerators, etc. removed.



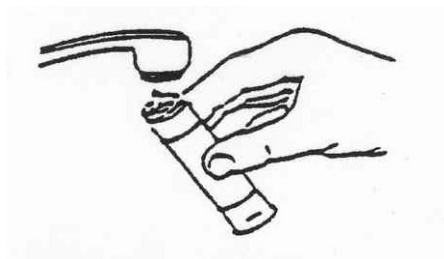
2. Let the water run long enough to clear all water, which has been standing in the lines (usually 5 to 10 minutes).



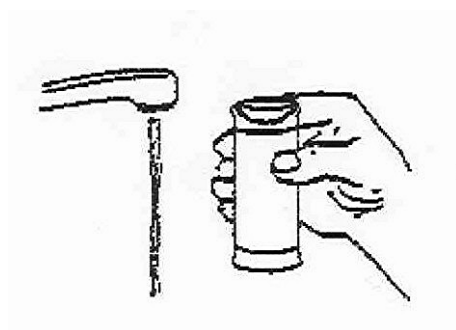
3. Reduce the water flow until the stream is about 1/4-inch in diameter (about the diameter of a pencil).



4. Take one of the sample vials and carefully remove the lid, taking care not to touch the inside of the cap or glass vial. Tilt the sample vial as shown in the illustration and fill by letting the water flow down the inside wall. The vials for sample collection contain a small amount of preservative. **Do not** rinse it out when collecting the sample.



5. As the glass vial fills rotate it to a vertical position. Fill the vial to the neck or to about ½ inch to the top.



6. The water in the vial should look like the figure below



7. Add the hydrochloric acid from the small vial to the sample



8. After adding the acid to the glass sample vial, carefully add water until the vial is full and the center appears to be higher than the vial. The water should form a dome over the top of the vial. Your sample should look like the example below.



9. Replace the cap and screw it on until it is snug. Do not over tighten because the cap will break. Avoid trapping air between the sample and the cap.



10. Shake the glass vial vigorously for 1 minute. Turn the vial upside down and lightly tap the cap. If no bubbles or leaks appear a good seal has been made and the sample is ready to ship to the laboratory. If bubbles are present go to step 11.



11. If bubbles are present, remove the cap and add a few drops of sample water and repeat step 9 and 10.

12. If additional samples are to be collected, repeat the steps above for each of them.

NOTE: Samples for Volatile Organic Chemicals must be kept at 4°C after collection. Refrigerate the samples until you can pack them on ice for shipping.

SAMPLE SHIPMENT

1. Place the sample vials in a Styrofoam packing container.
2. Place the container in a Ziploc bag and seal it.
3. Place the samples in the shipping container/cooler provided by the lab.
4. Cover the samples with ice. Include enough ice to allow for some melting during shipping to the lab.
5. Put the Styrofoam lid on the cooler.
6. Place the Sample Report Forms in a separate Ziploc bag and seal the bag.
7. Place the bag with the forms on top of the Styrofoam lid and fold the cardboard flaps over the top enclosing the bag of forms with the cooler.
8. Tape the box and ship to the DCLS Laboratory using one of the following:
 - a. DCLS Courier Service. Call the Regional VHD Office or the lab for the location of the nearest pick-up point for the courier service. There is no charge for the courier service.
Laboratory Support Services: (804) 786-4453
 - b. UPS
 - c. Fed Ex
 - d. Personal Carrier

Make any corrections to
Your Mailing Address

Peel-off Sample Labels
for Sample Vials

DGS-22-202 (REV 4/02) ORDER #11562 ADDRESS CHANGE		PWSID: 2187406 Waterworks: FRONT ROYAL, TOWN OF Source: INTAKE RAW WATER Facility: IN001 Location: INTAKE RAW WATER Sample Type: RT Compliance:	
NAME _____ COMPANY _____ ADDRESS _____ CITY _____ ST _____ ZIP _____		Mailing Address Mr. B. Keith Will FRONT ROYAL, TOWN OF 1 AQUEDUCT LANE P O BOX 1560 FRONT ROYAL, VA 22630	
TOCL Matches label on sample container		TOCL Use Ball Point Pen. Press Firmly. Place Peel-off Label on Bottle(s). Use Military Times.	
Sample Container: Date / Time Collected: _____ Military Time: _____		Sample Container: Date / Time Collected: _____ Military Time: _____	
Please complete for Lead & Copper or Fluoride Samples: Lead/Copper Date Last Used: / / Time Last Used: _____ Military Time		Fluoride (Check one) <input type="checkbox"/> Colorimetric <input type="checkbox"/> Electrode _____ ppm	
Collected By: _____ Phone # () _____		Kit Type	

Print Collector's Name and Phone Number
where we can call if there is a problem

SAMPLE FORM